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This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A process for producing and recovering ethanol from plant material, comprising:
 - reducing the plant material to produce material comprising starch;
 - the reduced plant material ~~have~~ having particle size such that at least about 50% of the particles fit through a sieve with a 0.1-0.5 mm mesh;
 - saccharifying the starch, without cooking, with an enzyme composition;
 - fermenting the saccharified ~~ineubated~~ starch to yield a composition comprising at least 15 vol-% ethanol;
 - fermenting comprising reducing temperature of fermenting mixture during active fermentation and production of ethanol; reducing the temperature of fermenting mixture comprising reducing the temperature from about 40 °C and to about 25 °C during fermenting or simultaneous saccharifying and fermenting; and
 - recovering the ethanol and co-products from the fermentation.
2. (Original) The process of claim 1, wherein plant material comprises corn, which comprises high amylopectin starch.
3. (Original) The process of claim 1, wherein the plant material comprises corn, sorghum, millet, wheat, barley, rye, or mixtures thereof.
4. (Original) The process of claim 3, wherein the corn comprises waxy corn.
5. (Original) The process of claim 3, wherein the corn comprises high protein corn.
6. (Original) The process of claim 3, wherein the corn comprises #2 yellow dent corn.

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7. (Original) The process of claim 1, comprising reducing the plant material with hammer mill, roller mill, or both hammer mill and roller mill.
8. (Original) The process of claim 7, comprising reducing the plant material to produce plant material of a size that at least 35% of the reduced plant material fits through a 0.1-0.5 mm screen.
9. (Original) The process of claim 1, comprising reducing the plant material with particle size reduction emulsion technology.
10. (Original) The process of claim 1, comprising simultaneous saccharifying and fermenting.
11. (Original) The process of claim 1, comprising decreasing temperature during saccharifying, fermenting, or simultaneous saccharifying and fermenting.
12. (Original) The process of claim 1, comprising saccharifying, fermenting, or simultaneous saccharifying and fermenting at temperature of 25-40 °C.
13. (Original) The process of claim 1, comprising saccharifying, fermenting, or simultaneous saccharifying and fermenting at temperature of 27-35 °C.
14. (Canceled)
15. (Currently Amended) A process for producing ethanol from plant material, comprising:
reducing the plant material to produce material comprising starch;
the reduced plant material having particle size such that at least about 50% of the
particles fit through a sieve with a 0.1-0.5 mm mesh;
saccharifying the starch, without cooking, with an enzyme composition;
fermenting the saccharified starch to yield a composition comprising at least 15 vol-%
ethanol;

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fermenting comprising reducing temperature of fermenting mixture during active fermentation and production of ethanol; and recovering ethanol and co-products from the fermentation;

~~The process of claim 1, comprising wherein~~ saccharifying, fermenting, or simultaneous saccharifying and fermenting are conducted at pH of about 3.0 to about 6.0,

16. (Currently Amended) The process of claim 1, comprising saccharifying, fermenting, or simultaneous saccharifying and fermenting at a pH of about 4.1 to about 5.3.
17. (Currently Amended) The process of claim 1, further comprising selecting a pH of about 4 to about 4.5 at start of fermentation fill.
18. (Currently Amended) The process of claim 1, further comprising achieving a pH of about 5 to about 5.5 as ethanol production reaches maximum level.
19. (Currently Amended) The process of claim 1, further comprising increasing a pH from about 4 to about 5.3 during saccharifying, fermenting, or simultaneous saccharifying and fermenting.
20. (Currently Amended) The process of claim 1, further comprising decreasing solid content from about ~~[[40]]~~45% to about 15% during saccharifying, fermenting, or simultaneous saccharifying and fermenting.
21. (Original) The process of claim 1, wherein the enzyme composition comprises alpha amylase, glucoamylase, protease, or mixtures thereof.
22. (Original) The process of claim 1, wherein saccharifying, fermenting, or simultaneous saccharifying and fermenting comprises adding protease.
23. (Original) The process of claim 1, wherein saccharifying, fermenting, or simultaneous saccharifying and fermenting comprises adding backset.

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24. (Original) The process of claim 1, wherein saccharifying, fermenting, or simultaneous saccharifying and fermenting comprising adding nitrogen.
25. (Original) The process of claim 1, comprising saccharifying and fermenting at rates that maintain concentration of glucose less than 3 wt-% in fermentation.
26. (Original) The process of claim 1, comprising saccharifying, fermenting, or both saccharifying and fermenting with about 0.1 to about 10 acid fungal amylase units (AFAU) per gram of dry solids reduced plant material and about 0.1 to about 6 glucoamylase units (AGU) per gram dry solids reduced plant material.
27. (Original) The process of claim 1, comprising starting saccharifying, fermenting, or both saccharifying and fermenting with about 25 to about 45 wt-% reduced plant material in water.
28. (Original) The process of claim 1, comprising starting saccharifying, fermenting, or both saccharifying and fermenting with residual starch at up to 20%.
29. (Currently Amended) The process of claim 1, further comprising producing greater than 18 vol-% ethanol in about 48 to 96 hours.
30. (Currently Amended) The process of claim 1, further comprising producing 18 vol-% to about 23 vol-% ethanol.
31. (Currently Amended) The process of claim 1, further comprising recovering the solids from the fermentation.
32. (Currently Amended) The process of claim 31, comprising recovering solids before, during, and after recovering the ethanol.

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33. (Original) The process of claim 31, comprising recovering distiller's dried grain.
34. (Original) The process of claim 31, wherein the distiller's dried grain comprises about 30-38 wt-% protein, about 11-19 wt-% fat, about 25-37 wt-% fiber.
35. (Original) The process of claim 31, wherein the distiller's dried grain comprises at least about 30% protein.
36. (Original) The process of claim 1, comprising running the process as a batch process or as a continuous process.
37. (Original) A process of drying distillation products from the production of ethanol, comprising:
producing starch from corn and ethanol from the starch;
producing reduced stack emissions of 1.47 or less pounds of volatile organic compounds per ton of corn.
38. (Original) The process of 37, further producing reduced stack emissions of 0.98 or less pounds of carbon monoxide per ton of corn processed.
39. (Original) A process for producing ethanol from plant material, comprising:
reducing the plant material to produce material comprising starch;
saccharifying the starch, without cooking, with an enzyme composition comprising acid fungal amylase;
fermenting the incubated starch to yield a composition comprising at least about 18 vol-% ethanol;
recovering ethanol from the fermentation.
40. (Original) A distiller's dried gain comprising at least about 30 wt-% protein.

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41. (Original) A distillers dried grain comprising about 30-38 wt-% protein, about 11-19 wt-% fat, about 25-37 wt-% fiber.
42. (Original) A corn beer comprising at least about 18% ethanol.
43. (New) The process of claim 21, wherein the alpha amylase comprises acid fungal amylase.
44. (New) The process of claim 1, wherein the enzyme composition comprises acid fungal amylase.
45. (New) The process of claim 11, comprising simultaneous saccharifying and fermenting.
46. (New) The process of claim 26, comprising simultaneous saccharifying and fermenting.
47. (New) The process of claim 11, further comprising producing greater than 18 vol-% ethanol in about 48 to 96 hours.
48. (New) The process of claim 26, further comprising producing greater than 18 vol-% ethanol in about 48 to 96 hours.
49. (New) The process of claim 1, comprising:
saccharifying the starch, without cooking, with an enzyme composition comprising acid fungal amylase; and
fermenting the incubated starch to yield a composition comprising at least about 18 vol-% ethanol.
50. (New) The process of claim 1, wherein fermenting comprises employing yeast.
51. (New) The process of claim 1, wherein the process produces:

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significantly less glycerol than conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions;

significantly less lactic acid than conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions;

significantly less acetic acid than conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions; or

significantly reduced contamination compared to conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions.

52. (New) The process of claim 31, wherein the distillers dried grain comprises about 1-2 wt-% more protein, about 1-6 wt-% more fat, about 3-13 wt-% more fiber than conventional process.

53. (New) The process of claim 15, comprising decreasing temperature during saccharifying, fermenting, or simultaneous saccharifying and fermenting.

54. (New) The process of claim 15, comprising saccharifying, fermenting, or simultaneous saccharifying and fermenting at temperature of 25-40 °C.

55. (New) The process of claim 15, comprising saccharifying, fermenting, or simultaneous saccharifying and fermenting at temperature of 27-35 °C.

56. (New) The process of claim 15, further comprising reducing temperature from about 40 °C and to about 25 °C during saccharifying, fermenting, or simultaneous saccharifying and fermenting.

57. (New) The process of claim 15, comprising saccharifying, fermenting, or simultaneous saccharifying and fermenting at pH of about 4.1 to about 5.3.

58. (New) The process of claim 15, comprising a pH of about 4 to about 4.5 at start of fermentation fill.

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59. (New) The process of claim 15, comprising a pH of about 5 to about 5.5 as ethanol production reaches maximum level.
60. (New) The process of claim 15, further comprising increasing a pH from about 4 to about 5.3 during saccharifying, fermenting, or simultaneous saccharifying and fermenting.
61. (New) The process of claim 15, wherein the enzyme composition comprises alpha amylase, glucoamylase, protease, or mixtures thereof.
62. (New) The process of claim 15, wherein saccharifying, fermenting, or simultaneous saccharifying and fermenting comprises adding protease.
63. (New) The process of claim 15, wherein saccharifying, fermenting, or simultaneous saccharifying and fermenting comprising adding nitrogen.
64. (New) The process of claim 15, comprising saccharifying and fermenting at rates that maintain concentration of glucose less than 3 wt-% in fermentation.
65. (New) The process of claim 15, comprising saccharifying, fermenting, or both saccharifying and fermenting with about 0.1 to about 10 acid fungal amylase units (AFAU) per gram of dry solids reduced plant material and about 0.1 to about 6 glucoamylase units (AGU) per gram dry solids reduced plant material.
66. (New) The process of claim 15, comprising starting saccharifying, fermenting, or both saccharifying and fermenting with about 25 to about 45 wt-% reduced plant material in water.
67. (New) The process of claim 15, comprising starting saccharifying, fermenting, or both saccharifying and fermenting with residual starch at up to 20%

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68. (New) The process of claim 15, further comprising recovering solids from the fermentation.
69. (New) The process of claim 68, comprising recovering solids before, during, and after recovering the ethanol.
70. (New) The process of claim 68, comprising recovering distiller's dried grain.
71. (New) The process of claim 70, wherein the distiller's dried grain comprises about 30-38 wt-% protein, about 11-19 wt-% fat, about 25-37 wt-% fiber.
72. (New) The process of claim 70, wherein the distiller's dried grain comprises at least about 30% protein.
73. (New) The process of claim 15, comprising running the process as a batch process or as a continuous process.
74. (New) The process of claim 61, wherein the alpha amylase comprises acid fungal amylase.
75. (New) The process of claim 15, wherein the enzyme composition comprises acid fungal amylase.
76. (New) The process of claim 15, comprising simultaneous saccharifying and fermenting.
77. (New) The process of claim 15, further comprising producing greater than 18 vol-% ethanol in about 48 to 96 hours.
78. (New) The process of claim 15, comprising:
saccharifying the starch, without cooking, with an enzyme composition comprising acid fungal amylase; and

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fermenting the incubated starch to yield a composition comprising at least about 18 vol-% ethanol.

79. (New) The process of claim 15, wherein fermenting comprises employing a fermenting microorganism.

80. (New) The process of claim 15, wherein the process produces:

significantly less glycerol than conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions;

significantly less lactic acid than conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions;

significantly less acetic acid than conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions; or

significantly reduced contamination compared to conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions.

81. (New) The process of claim 3, wherein the corn comprises highly fermentable corn.

82. (New) A distillers dried grain comprising about 1-2 wt-% more protein, about 1-6 wt-% more fat, about 3-13 wt-% more fiber than conventional process.

83. (New) A distillers dried grain comprising:

increased flowability compared to distillers dried grain from conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions; or

decreased packing compared to distillers dried grain from conventional saccharification and fermentation without cooking at otherwise identical fermentation conditions.